

Docket No.: 4590-388

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	EXPEDITED PROCEDURE
	:	Response under 37 CFR 1.116
Nicolas BERTHOU et al.	:	Confirmation No. 3105
	:	
U.S. Patent Application No. 10/531,081	:	Group Art Unit: 2612
	:	
Filed: October 31, 2005	:	Examiner: McNally, Kerri L.

For: AIRCRAFT INSTRUMENT PANEL

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Attention: BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF

This brief contains the following items in the order set forth below (37 C.F.R. § 41.37(c)):

- I. Real Party in Interest.
- II. Related Appeals and Interferences.
- III. Status of Claims.
- IV. Status of Amendments.
- V. Summary of Claimed Subject Matter.
- VI. Grounds of Rejection to be Reviewed on Appeal.
- VII. Argument.
- VIII. Claims Appendix.
- IX. Evidence Appendix.
- X. Related Procedures Appendix.

I. REAL PARTY IN INTEREST

The real party of interest is:

THALES
45 RUE DE VILLERS
92200 NEUILLY SUR SEINE, FRANCE

As evidenced by the assignment recorded on 04/08/2005 at Reel/Frame 016919/0777.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There is a total of 19 claims in the application, which are identified as claims 1-19

B. Status of all the claims

1. Claims cancelled: none
2. Claims withdrawn from consideration but not cancelled: none
3. Claims pending: claims 1-9
4. Claims allowed: none
5. Claims rejected: 1-19
6. Claims objected to: claims 6, 16-19
7. Claims on Appeal: 1-5 and 7-15

IV. STATUS OF AMENDMENTS

No amendments were proposed in the response (dated 02/25/2008) to the Final Office Action and therefore the claims stand as they were finally rejected. Therefore, the statement in the Advisory Action dated 03/18/2008, that the (non-existent) amendments submitted in the after final response were not entered, is in and of itself, incorrect.

The possibility of reopening prosecution or accepting a second after final amendment was proposed telephonically to Examiner McNally and her supervisor Davetta Goins with a view of improving the syntax and form of at least claim 1. Upon consideration, Examiner McNally indicated that it would more than likely not be entered and that reopening prosecution was not an option. Appellants take this reticence to either enter the suggested amendments or to acknowledge that the claims are defective (indefinite) in any way, as clear confirmation that the claims, as they stand, are definitely considered to be clear and distinct by the Examiner. This position is further evidenced by the absence of any rejections under 35 USC § 112, in either of the two examinations of this application. Appellants conclude that the Examiner, without reservation, holds the claims to be in condition for presentation to the Board without amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to an aircraft instrument panel, comprising a main display system (Fig. 3, page 1, lines 36-40) for horizon and necessary piloting parameters (page 2 lines 3-21), and on the other hand an item of automatic pilot control equipment (page 2, lines 23-34), which comprises manual piloting set point control buttons (page 6 lines 13-26 and 28-38) and finally an item of standby display equipment (Figs. 4 and 5, 80, 80') allowing the display, independently of the main display system, of integrated standby data including a standby horizon,

wherein the automatic pilot control equipment and the standby display equipment are two identical items of equipment (page 8, lines 15-31) from the hardware point of view and the software point of view and each comprises a display screen (Fig. 3, page 7, lines 19-36) capable of displaying the integrated standby data, and in that the two items of equipment have at least two operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot, the items of equipment each operating in a different mode in normal operating conditions (page 8, lines 15-31).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Sole Ground of Rejection

The sole ground of rejection resides in the rejection of claims 1-5 and 7-15 under 35 USC § 103(a) as being unpatentable over United States Patent No. 6,867,711 to Langner et al. (hereinafter Langner) in view of United States Patent No. 6,057,786 to Briffe et al. (hereinafter Briffe) and United States Patent No. 6,281,810 to Factor.

VII. ARGUMENT

Sole Ground of Rejection

The Appellant respectfully submits that the Examiner has erred in rejecting claims 1-5 and 7-15 under 35 USC § 103(a) as being unpatentable over Langer in view Briffe and Factor.

As noted above, claims 6, 16, 17, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, the final rejection of these claims is not appealed.

It is submitted that none of Langner, Briffe or Factor teaches the standby display equipment as set forth in claim 1. Claim 1 recites a standby display equipment allowing the display, independently of the main display system, of integrated standby data including a standby horizon. The standby display equipment is required to be identical to the automatic pilot control equipment from both hardware and the software point of view. The standby display equipment comprises a display screen capable of displaying the integrated standby data, and has at least two operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot. Under normal operating conditions, the standby display equipment operates in a different mode from the automatic pilot control equipment.

As depicted in the embodiments of the present application and as generally understood in the art, the standby display equipment is a piece of equipment which produces and displays information, independently from the production and the display of the corresponding primary information that are displayed on a main display, so as to provide essential data in the event that the main display systems fail.

In order to facilitate and understanding of the claimed invention, Applicant respectfully submits the following explanation relating to “standby display equipment.”

A small aircraft may not have standby display equipment, while large aircraft generally do have one. In addition to the standby equipment, large aircraft frequently have a pilot and a copilot, each having his/her own main display. However, standby equipment is an additional display distinct from the main displays, i.e. the main display of the copilot is not the standby equipment of the pilot or vice-versa, because the main displays use the same source of information while a standby equipment uses its own sources of information. In this respect, note that Briffe discloses the general scheme of two main displays (for pilot and co-pilot respectively) and a standby equipment. See col 4, lines 7-8 of Briffe which states:

Instrument panel 12 also includes standby equipment (not shown).

The standby instruments may be of conventional type.

Confusion should not be made between a dual display arrangement for a pilot and a copilot, and an independent standby display for displaying information upon failure of the main display system or the main displays systems.

As described at page 1, lines 11-35 of the Specification of the present application (see Paragraph [0002] of US Patent Publication No. 2006/0164260), standby equipment conventionally displays: horizon, attitude, altitude, speed, which is the information that the pilot will need in case of failure of the main system and display.

Langner shows one display or several displays, but does not disclose standby equipment within the generally understood meaning. Nowhere, does Langner suggest as to how a standby equipment could relate to the automatic pilot control and display, which is the subject of the claimed invention.

The Examiner acknowledges in the rejection that Langner does not expressly disclose:

- a main display system for horizon and piloting parameters separate from the automatic pilot control equipment and standby display equipment
- automatic pilot control equipment and standby display equipment each have two

operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot, wherein each operate in a different mode in normal operating conditions

In order to overcome these admitted shortcomings and absence of disclosure, the rejection turns to Briffe and Factor.

However, this means that the rejection is effectively based on what is not disclosed and that what is not disclosed is found in other references. The problem with this is that the hypothetical person of ordinary skill is not permitted to determine what is claimed and what is not disclosed in any given reference. It is submitted that a proper case of *prima facie* obviousness must be based on what is (actually) disclosed not what is not disclosed.

The examiner is correct in that a § 103 rejection does not require the primary reference to teach all of the claimed features. If it did then the rejection could be made under § 102. Nevertheless, as noted above, the rejections cannot be properly based on what is not disclosed.

Briffe discloses 1) a head-up display and the provision of 2) standby equipment on the instrument panel. However, there is in Briffe no hint to the fact that the head up display could be identical to the standby equipment, and moreover no hint to the fact that the head-up display would display standby information rather than normal information. Therefore, the requirement that the “automatic pilot control equipment and the standby display equipment are two identical items of equipment from the hardware point of view and the software point of view” cannot be met, and therefore this reference cannot be relied upon to lead the hypothetical person of ordinary skill to the claimed subject matter.

Further, Briffe fails to suggest that the standby equipment relates to the automatic piloting control and display, and therefore cannot meet or suggest the requirements of the automatic pilot control equipment and the standby display equipment each having at least two operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot, the items of equipment each operating in a different mode in normal operating conditions.

Factor is directed to an arrangement wherein there is only one screen and wherein two sources are used to project images on this single screen – see claim 1 of Factor for example.

Column 5, lines 21 – 45 of Factor is such as to disclose:

Each projector 46, 52, 54 and its operating computer 30 is capable of illuminating the **entire screen 44** and giving the pilot a display of the data from all six sensors or instruments. While it is possible for both computers to display all instruments at all times, simultaneous display of the same instrument from both computers is undesirable for two reasons. First, it requires very fine mechanical adjustment to make sure that each pixel matches on the screen for both projectors. Second, there is always a small uncertainty in the data from the sensors. For example, one computer might calculate the altitude as 15,010 feet and the other at 15,015. Although these numbers are well within the error margin for an altitude indicator, it would be confusing to the pilot show both figures at once either overlaid at the same location 16, or even offset in location. Therefore, normal operation of the computers causes one projector/computer combination to illuminate, for example, the bottom row of "instruments" or displays and the other computer to illuminate the top row. This is accomplished by the respective computer turning off the appropriate pixels in its LCD imaging unit. A simple toggle switch 62 on or near the front screen 44 is connected to each computer 40 to enable the pilot to select normal operation (as described above) **or computer/projector combination of one or two to illuminate the whole screen**, and to disable either

redundant element if it becomes defective. (Emphasis added)

Column 5, lines 40-53 discloses:

A simple toggle switch 62 on or near the front screen 44 is connected to each computer 40 to enable the pilot to select normal operation (as described above) or computer/projector combination of **one or two to illuminate the whole screen**, and to disable either redundant element if it becomes defective. Slightly more complicated control logic in the computers 30 could be enabled to reverse the two displays if, for example, the altitude sensor digitizer on one were defective, or to even replace individual "instruments" on one computer display with the instrument from the other. **If failure of one illumination device 52 were detected, the computers would cause the second device 52 to automatically illuminate the whole screen instead of just its half.** (Emphasis added)

Factor, therefore, actually leads away from the automatic pilot control equipment and the standby display equipment each comprising its own display screen capable of displaying the integrated standby data. Viz., In a nutshell, Factor has but one screen onto which images can be redundantly projected.

Further, Factor does not disclose any relation between a standby instrument and the automatic piloting control, which are required by the claimed invention. The screen shown in Factor is the main display; there is no separate standby equipment as claimed here, separate from the main display, and there is no standby equipment also having an automatic piloting control. As a matter of fact there is no automatic piloting at all in Factor, and consequently no set point control buttons as claimed in claim 1.

While the Briffer and Factor references have been discussed individually, it is submitted that the shortcomings pointed out in connection therewith are such as to demonstrate that the hypothetical person of ordinary skill would not be led to the claimed subject matter by the teachings of the three references relied upon for rejection, when taken either individually or in combination.

Based on the afore-mentioned reasons, Langner, Briffe and Factor cannot be combined, in a manner that would lead the hypothetical person of ordinary skill to the claimed subject matter and the provision of standby display equipment as recited in claim 1. Accordingly, a reversal of the rejection is requested.

If for any reason this Appeal Brief is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, Applicant's attorney of record.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
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VIII. CLAIMS APPENDIX

1. An aircraft instrument panel, comprising a main display system for horizon and necessary piloting parameters, and on the other hand an item of automatic pilot control equipment, which comprises manual piloting set point control buttons and finally an item of standby display equipment allowing the display, independently of the main display system, of integrated standby data including a standby horizon,

wherein the automatic pilot control equipment and the standby display equipment are two identical items of equipment from the hardware point of view and the software point of view and each comprises a display screen capable of displaying the integrated standby data, and in that the two items of equipment have at least two operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot, the items of equipment each operating in a different mode in normal operating conditions.

2. The instrument panel as claimed in claim 1, wherein the set point control buttons are active on the equipment that is in piloting set point display mode and inactive as control buttons for set point adjustment on the equipment that is in standby data display mode.

3. The instrument panel as claimed in claim 1 wherein the control buttons of the item of equipment that is in piloting set point display mode allow the establishment of set point adjustment signals that are also transmitted to the other item of equipment, which also processes these signals without however displaying the set points.

4. The instrument panel as claimed in claim 1 wherein each of the two items of equipment comprises a switchover control button which is used to invert the operating modes of the two items of equipment.

5. The instrument panel as claimed in claim 1, wherein means are provided, in the event of the failure of one of the two items of equipment, for switching the other item of equipment to automatic pilot set point display mode if it is not already in that mode.

6. The instrument panel as claimed in claim 1, wherein the items of equipment comprise a control button distinct from the piloting set point adjustment buttons, for resetting the atmospheric pressure for the purpose of an altitude computation, this button being active for the resetting of pressure only when the equipment is in standby data display mode.

7. An integrated item of standby equipment intended to be mounted on an instrument panel as claimed in one of the preceding claims wherein it comprising both the hardware and software capable of displaying on a single display screen either standby data, including a standby horizon, when the equipment is operating in a standby data display mode, or automatic pilot set points when the equipment is operating in a piloting set point display mode, the equipment being provided with piloting set point adjustment buttons.

8. The equipment as claimed in claim 7, wherein it comprising an atmospheric pressure reset button, active when the equipment is in standby data display mode.

9. The equipment as claimed in claim 8, wherein the equipment has a mode switchover button, active for inverting the equipment operating mode and capable of sending a mode inversion signal to another identical item of equipment of the same instrument panel.

10. The instrument panel as claimed in claim 2, wherein the control buttons of the item of equipment that is in piloting set point display mode allow the establishment of set point adjustment signals that are also transmitted to the other item of equipment, which also processes these signals without however displaying the set points.

11. The instrument panel as claimed in claim 2, wherein each of the two items of equipment comprises a switchover control button which is used to invert the operating modes of the two items of equipment.

12. The instrument panel as claimed in claim 3, wherein each of the two items of equipment comprises a switchover control button which is used to invert the operating modes of the two items of equipment.

13. The instrument panel as claimed in claim 2, wherein means are provided, in the event of the failure of one of the two items of equipment, for switching the other item of equipment to automatic pilot set point display mode if it is not already in that mode.

14. The instrument panel as claimed in claim 3, wherein means are provided, in the event of the failure of one of the two items of equipment, for switching the other item of equipment to automatic pilot set point display mode if it is not already in that mode.

15. The instrument panel as claimed in claim 4, wherein means are provided, in the event of the failure of one of the two items of equipment, for switching the other item of equipment to automatic pilot set point display mode if it is not already in that mode.

16. The instrument panel as claimed in claim 2, wherein the items of equipment comprise a control button distinct from the piloting set point adjustment buttons, for resetting the atmospheric pressure for the purpose of an altitude computation, this button being active for the resetting of pressure only when the equipment is in standby data display mode.

17. The instrument panel as claimed in claim 3, wherein the items of equipment comprise a control button distinct from the piloting set point adjustment buttons, for resetting the atmospheric pressure for the purpose of an altitude computation, this button

being active for the resetting of pressure only when the equipment is in standby data display mode.

18. The instrument panel as claimed in claim 4, wherein the items of equipment comprise a control button distinct from the piloting set point adjustment buttons, for resetting the atmospheric pressure for the purpose of an altitude computation, this button being active for the resetting of pressure only when the equipment is in standby data display mode.

19. The instrument panel as claimed in claim 5, wherein the items of equipment comprise a control button distinct from the piloting set point adjustment buttons, for resetting the atmospheric pressure for the purpose of an altitude computation, this button being active for the resetting of pressure only when the equipment is in standby data display mode.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None - There are no related proceedings